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AUTHOR Franklin, Hugh
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ABSTRACT

Libraries at 52 U.S. colleges and universities offering engineering programs were surveyed by mail to determine how they handled the engineering information needs of off-campus, nonacademic users. Twenty-five provided usable responses. For this sample, 60.4% of the estimated serivce is to companies, 18.8% to consultants/entrepreneurs/inventors, 13.2% to government agencies, and 7.6% to "others." Service to technical companies exceeds that to legal companies by a ratio of 13.5 to 1. State government agencies receive more service than federal government agencies by a ratio of 1.4 to 1. Most service is provided within the urban area of the particular library. Reference account for 33% of services; circulation for 27.4%; interlibrary loan for 19.8%; online searching for 16.4%; document delivery for 2.2%; and "other" for 1.2%. Fees charged vary widely among libraries. Circulation fees are charged by 54.5% of the responding libraries, with no allowance for level of use. Five libraries (22% of the respondents) charge for any type of reference service. Nine appended "figures" include the survey instrument and tables and graphs displaying the survey results. (15 references) (Author/SD)

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A PRELIMINARY LOOK AT HOW NON-ACADEMIC, OFF-CAMPUS PATRONS USE COLLEGE AND UNIVERSITY LIBRARY ENGINEERING MATERIALS AND SERVICES

By: Hugh Franklin
Engineering Librarian
Oregon State University
Corvallis, Oregon

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January 1990

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Summary

Libraries at fifty-two U.S. colleges and universities offering four-year and beyond engineering programs were surveyed through a mailed questionnaire to determine how they handled the engineering information needs of off-campus, non-academic users. Twenty-five (48%) provided usable responses.

For this sample, 60.4% of the estimated service is to companies, 18.8% to consultants/entrepreneurs/inventors, 13.2% to government agencies, and 7.6% to "other." Service to technical companies exceeds that to legal companies by a ratio of 13.5 to one. State government agencies receive more service than federal government agencies by a ratio of 1.4 to one. Most service is provided within the urban area of the particular library, with much less statewide, and even less out-of-state.

Books and periodicals account for 64.7% of total use, standards for 12.4%, product information for 5.7%, technical reports for 12.8%, and "other" for 4.5%.

Reference accounts for 33% of services, circulation for 27.4%, interlibrary loan for 19.8%, online searching for 16.4%, document delivery for 2.2%, and "other" for 1.2%.

Fees charged vary widely between libraries. Circulation fees are charged by 54.5% of the responding libraries, with a range from $15 to $300 per year, with no allowance for level of use. Only five libraries (22% of those responding) charge for any type of reference service, with a range from $20 to $45 per hour.

Very little specific budgetary support for service to these users is indicated.

Background

The theme for the 1986 Annual Conference of the ASEE (American Society for Engineering Education) was "Partnership With Industry and Community". The background and interests of this author as an engineer in industry and as an engineering librarian suggested that a brief study on how non-academic, off-campus patrons use college and university library engineering materials and services might be useful.

Services offered, particularly fee-based services, are documented in several sources. For instance, the Association of Research Libraries has published SPEC Kits 73, 74, and 88 (1, 2 and 3), which include, respectively, a collection of policies on the use of research libraries by unaffiliated users, 29 papers on user fees and associated issues for library services at research libraries, and documents from and results from a telephone survey of 23 research libraries offering services to the business community. Evans (4) includes a literature review covering fee-based services at academic libraries and results of a survey of fee-based services at some specific libraries. And Donnellan and Rasmussen (5) summarize results of a questionnaire survey of 1590 academic libraries concerning their fee-based services (of which 58.9% provided usable responses).

Services to off-campus users offered by some specific academic libraries are documented by Baker at Massachusetts Institute of Technology (6), Cady and Richards at Lehigh University (7), Hornbeck at Georgia Institute of Technology (8) and Citron and Dodd at the same institution (9).

Finally, the problems and challenges of fee-based services in academic libraries were discussed at the First Conference on Fee-based Research in College and University Libraries (10), by Piternick (11), and by Ungarelli and Grant (12), as well as throughout many of the references previously noted.

These sources clearly contain a wealth of information on policies and practices of academic libraries regarding services to unaffiliated users and the various issues and problems involved. However, on closer scrutiny, important information is lacking. Neither fee-based policies nor studies of fee-based services necessarily describe the unaffiliated users and the variety and mix of materials and services they actually use. In fact, Evans notes that "Though the literature reveals a wealth of polemics on the use of fees, and there is considerable recitation of what services are covered by fee policies, there is a striking absence of literature that details the operation of the fee-based services in the organizational environment" (13).

Many questions remain unanswered or at least poorly answered. Are unaffiliated users represented only by companies ? How about

entrepreneurs, small consultants, and individual specialists ? And what about law firms and government agencies ? What is the relative distribution of different types of materials and services actually used ? Are they mostly on-the-shelf books and journals, or are special materials such as technical reports and patents more important ? And how much does online computer searching contribute to total use ? Are academic libraries recovering their costs for these special services, especially for reference services ? And how much of the total library service effort is devoted to outside users ?

To answer questions such as these, in a preliminary way and for engineering only, the present study was made. Preliminary results were presented at the 1986 Annual Conference of ASEE in a session sponsored by the Engineering Libraries Division (Session No. 3539).

Survey Design and Methodology

The survey form used is shown in Figure 1, together with the cover letter. It is divided into four major parts:

1. Description of off-campus organizations and individuals who use engineering materials and services (how many in each category, how close they are to campus, and percent of use by each category)

2. Types of engineering materials used, including the percent of use of each type

3. Services offered, including the percent of use for each type, whether or not fees are charged, and if so, how they are determined

4. Additional questions regarding the promotion of engineering materials and services to these users, who is believed to be satisfying their needs, and financial support for such materials and services

It was anticipated that "hard" data would be either lacking or difficult to obtain, so approximations and rough estimates were encouraged. A second reason for not requesting "hard" data was to, hopefully, increase the response rate.

The instrument was not pretested, but was submitted to two librarians, both managers of engineering libraries at major universities, and both members of the ASEE Engineering Libraries Division, for their suggestions and critique. Their suggestions were incorporated where appropriate.

Copies of the survey form were mailed, with SSAE, to librarians at 51 institutions with engineering programs. Each of the recipients was a member of the ASEE Engineering Libraries Division, and each

was selected as nearly as possible as being the most appropriate person to answer the survey questions. This author also participated in the survey.

Twenty five completed surveys were received, for a return rate of 48 percent (25 out of 52). There was no followup.

A few respondents requested anonymity for their institutions, so anonymity was maintained for all.

The sample was obviously not randomly selected, and preserving anonymity of the institutions prevents any detailed breakdown by their location, size, etc. However, their privacy is not compromised by noting that the responding institutions are reasonably well-dispersed throughout the United States, with no large concentration within any single state or region, and that four-year schools as well as those with graduate programs are represented.

Finally, "engineering libraries" represented herein are generally not clearly defined units. In some cases they are integral parts of larger units, whether these be science/technology divisions, separate science/technology libraries, or units representing other combinations of academic disciplines. In many cases, "research" services, specifically interlibrary loan and online searching, are performed by separate units serving the entire library system. And in a few cases, separate services, with or without a separate service unit, have been established solely to serve business and industry. The single common factor that ties these "engineering libraries" together for purposes of this survey is the responding librarian, who, in nearly all cases, exhibited considerable knowledge of what was going on in the sometimes scattered parts.

Results and Discussion

Users:

Estimated percentages of the different user categories are tabulated in Figure 2 for the 25 responding libraries. Seven libraries either did not answer these questions or their answers were not usable. Apparently this section was more troublesome to respondents than any other; response to the following two sections is much more complete.

Although there is considerable variation between libraries in their off-campus clientele, companies account for most of the services delivered, 12 of 18 libraries estimating this category at 60% or higher. Eight of the 18 responding libraries estimate the consultants/entrepreneurs/inventors category at 20% or more, while 9 of 18 estimate government agencies at 11% or more. Libraries #15 and #25 show very high percentages under "other". Numerous individuals not falling into the designated categories are

responsible in both instances.

Most of the companies are technical rather than legal. Ten libraries estimated percentages for both types; of these, the average ratio of technical to legal is 13.5 to one.

Estimated percentages for state and federal government agencies show some tendency toward higher use by state agencies. Of the 15 libraries providing an estimated division, the average ratio of service to state versus federal agencies is 1.4 to one.

Answers for each category are averaged in Figure 3, based in each case on those who responded. As expected, relative differences between categories are shown much more clearly than in the tabulations. More than 60% (60.4) of the estimated service is, indeed, to companies, while consultants/entrepreneurs/inventors accounts for 18.8%, government agencies for 13.2%, and "other" for 7.6%.

With regard to proximity of the users, most service was indicated as being within the urban area of the particular library, with much less service statewide, and even less out-of-state.

Types of Material:

Tabulations of use by type of material are shown in Figure 4, again as estimated percentages. Twenty four libraries contributed usable responses. Again, there is considerable variation between libraries. Books and periodicals are the most used type of material, by a considerable margin. Under "other", three libraries indicated appreciable use of patents, one estimating 25% of total materials use.

Percent use is averaged in Figure 5, based on the 24 libraries responding. Books and periodicals account for 64.7% of the use, standards for 12.4%, product information for 5.7%, technical reports for 12.8%, and "other" for 4.5%.

Services:

Use tabulations by type of service are presented in Figure 6. Twenty one libraries contributed usable responses. There is again a very great variation between libraries. For instance, Libraries #2 and #12 do mostly interlibrary loan (70% and 65%, respectively), Libraries #4 and #14 do lots of ready reference (50% for each), Library #14 handles a heavy phone reference load (50%), Library #11 supports a heavy mail reference service (75%), and three libraries (#3, #8, and #22) do a considerable amount of online database searching (50%, 50%, and 82.22%, respectively).

On the other hand, extended reference is not appreciable (20% for Library #6; much less for the others), and the same can be said

for document delivery (20% for Library #17, 15% for Library #24, 5.56% for Library #22, 5% for Library #1, and zero for the others).

Some additional patterns become apparent when percent use is averaged for the responding libraries (Figure 7). Reference of all kinds accounts for 33%, circulation for 27.4%, interlibrary loan for 19.8%, online searching for 16.4%, document delivery for 2.2% and "other" for 1.2%. It seems especially significant that the most common public services, reference and circulation, account for more than 60% of the total, while the services more closely associated with support of researchers, interlibrary loan, online searching, and document delivery, together account for less than 40%.

Fees for Services:

Online Searching

Twenty one libraries indicated that they charge for online searching. Of the other four libraries, one did not answer, one does not offer this service, one provided an ambiguous answer, and one indicated merely that the service was provided by a separate unit. There is little to be gained by analyzing this result further, since extensive charging for online searching is a well-established, well-known phenomena.

Interlibrary Loan

Fees are charged for interlibrary loan by most of the libraries, which, again, is not surprising. Confusion with the separate question regarding document delivery seems likely based on the comparatively incomplete answers. With hindsight, "document delivery" should probably have been designated as "other document delivery services", since interlibrary loan is one type of document delivery system.

A more important focus of this report is on fees for the two more common services, reference and circulation. Answers for these services are tabulated in Figure 8, and specific fees are quantified in Figure 9.

Circulation

Fees for circulation are charged by 12 of the 22 libraries responding to this question (54.5%). Donnellan and Rasmussen show an even lower percentage (33.5%) for academic libraries generally (14). Very large variations in the amounts charged are apparent.

While these data suggest that many libraries do charge off-campus users for checking out materials, it is perhaps more important to ask why so many do not. Another question that might be asked is

why circulation fees, in contrast to those for online searching and interlibrary loan, are a flat fee per year (with one exception), regardless of how many items are actually checked out. Is this fair? What about the occasional user who requires only a handful of items? Why should he or she be assessed the same amount as someone who checks out a hundred items? Why isn't staff time considered? Is it really so difficult to estimate the staff cost (including overhead) associated with checking out a book? Finally, why is there such a wild variation between libraries? It is understandable that some libraries feel philosophically obligated to serve off-campus, in-state users without charge, but for those who do charge, presumably to recover costs, how can annual fees ranging from $15 to $300 be justified? How can professional library staff be so confused about the value of their time?

Reference

Only five libraries charge for any type of reference service. No library indicated that it charges for ready reference, only four charge for extended reference, only one for phone reference, and only four for mail reference. Furthermore, there is an almost complete mismatch between reference services comprising a significant portion of a library's total service and whether or not that library charges for such service. For example, of the libraries estimating that 20% or more of their service is for extended reference, phone reference, or mail reference, only one of four (Library #11 for mail service) imposes fees. And if we lower the limit to 10%, fees are still levied in only three of twelve cases.

Reference service fees, for the few libraries which levy them, are at least based on the amount (hours) of service provided. They seem to reflect realistic attempts to recover costs.

One possible reason why so few libraries charge off-campus users for reference may be the perceived difficulty in identifying off-campus users at the reference desk. Dodd, for instance, notes that "It is difficult with an open door policy to identify the off-campus users. They look just like students and faculty members" (15). It seems highly unlikely that reference librarians would argue with this statement. A possible solution might be to require presentation of an ID card for reference service, as is often required of students and faculty at the Circulation Counter. If libraries are really serious about recovering costs for all services to off-campus users, it is time all extended reference service, whether it be in person, through the phone, or by mail be included, and that the charges reflect the amount of use.

Responses to Additional Questions:

All 25 libraries answered Question #4 regarding whether or not collections and services are promoted to off-campus users, and if

so, how. Ten indicated that they do promote in this area. The vehicles noted for such promotion are corporate borrowing cards, Friends of the Library (three libraries), free seminars, a special business and industry service unit (four libraries), word-of-mouth (two libraries), brochures, TV ads, mailings, press releases, speeches to professional groups, ads in an alumni magazine, and an engineering newsletter.

Twelve libraries indicated that they have a Friends of the Library organization (Question #5). Ten of these include off-campus, non-academic users in it, and six of these ten use Friends of the Library dues in some way to supplement their regular library budget.

Regarding the amount of support provided for services to off-campus, nonacademic users (Question #6), ten libraries are given no specific support (financial or staff). Of the remaining four who answered the question, one estimated less than one percent of the budget, one less than two percent, one $500 to $1000 per year, one "very little", and one $10,000 to $12,000 per year (for technical reports). But the question was not worded to include materials, so support for technical reports does not answer the question, and the $500 to $1000 support likewise may not be for services.

Answers to Question #7 elicited a variety of responses. Public libraries, state libraries, state agency libraries, information brokers, and other university libraries within the state were each noted by one or more of the respondents as helping to serve the engineering information needs of off-campus, nonacademic users. There was no consensus as to who was filling a majority of these needs. Libraries in the surrounding area, the surrounding corporate environment, and nearby commercial information services obviously varied considerably. Superior collections were given most often as the special advantage held by the responding library.

Conclusions

The following conclusions should be considered as tentative only. They are based on survey responses from 25 college and university libraries offering engineering materials and services. The sample is reasonable, but is not random, and, in any case, is too small for definitive results.

1. Very large differences between libraries were found.

2. Companies account for 60.4% of the service to off-campus, nonacademic users of engineering materials and services, consultants/entrepreneurs/inventors for 18.8%, government agencies for 13.3%, and "other" for 7.6%.

3. The average ratio of service to technical companies versus legal

companies is 13.5 to one.

4. The average ratio of service to state government agencies as opposed to federal government agencies is 1.4 to one.

5. Books and periodicals comprise 64.7% of the total materials use, standards, 12.4%, product information, 5.7%, technical reports, 12.8%, and "other", 4.5%.

6. Reference and circulation together account for 60.4% of all service to these users (33% and 27.4%, respectively), while the more research-oriented services (interlibrary loan, online searching, and document delivery) account for only 19.8%, 16.4%, and 2.2%, respectively.

7. Fees for circulation are charged by 54.5% of the 22 libraries responding to the question. They vary from $15 to $300 per year, with no apparent explanation for such a wide range, and no allowance for individual variations in use (with one exception).

8. Only five libraries (of 23 responding to the question) charge for any type of reference service. The fees ($20 to $45 per hour) are at least based on amount of service, and they reflect apparently serious attempts to recover costs.

9. Responses to additional questions offer no surprises, except that there is apparently very little specific budgetary support (financial or staff) indicated for services to these users.

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11) Piternick, Anne B. "Problems of Resource Sharing with the Community; a Case Study". Journal of Academic Librarianship 5(3):153-158, July 1979.

12) Ungarelli, Donald L. and Mary McNierney Grant. :A Fee-Based Model; Administrative Considerations in an Academic Library". Drexel Library Quarterly 19(4):4-12, Fall 1983.

13) Evans, page 20

14) Donnellan and Rasmussen, page 70

15) Dodd, James Beaupre, "Ins and Outs of Charging for Research Service", from Proceedings of Conference on Fee-Based Research in College and University Libraries, Greenvale, New York, June 17-18, 1982, page 30.

Figure 1

SURVEY ON HOW COLLEGE & UNIVERSITY LIBRARIES SUPPORT THE ENGINEERING INFORMATION NEEDS OF OFF-CAMPUS, NON-ACADEMIC USERS

1. Briefly describe the off-campus organizations and individuals who use engineering materials and/or services provided by your library by completing the following columns. Estimates of number can be very rough, such as "none", "2 or 3", "a dozen or so", etc. Estimates of proximity can also be very rough, such as "next door", "across town", "across the country", etc.

CATEGORY OF USER	APPROXIMATE NUMBER OF USERS (Specify whether individuals or organizations)	PROXIMITY OF USERS TO YOUR LIBRARY	PERCENT OF SERVICE FOR EACH CATEGORY OF USER
Companies*			
. legal			
. technical			
Consultants, Entrepreneurs, & Inventors			
Government* Agencies (State)			
Government* Agencies (Federal)			
Other* (Do not include other academic institutions)			

Total must be 100%.

* including their libraries

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Figure 1 (Cont'd.)

2. Note types of material in your collection which receive use by off-campus, nonacademic users.

TYPE OF MATERIAL	YES/NO?	APPROXIMATE PERCENT OF USE FOR EACH TYPE OF MATERIAL
Standards, Codes, & Specifications		
Product Information (Catalogs,etc.)		
Technical Reports		
"Regular" Academic Books & Periodicals		
Other (Specify)		

		Total must be 100%.

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Figure 1 (Cont'd.)

3. Note the services you provide to off-campus, nonacademic users, how they are paid for, and the approximate percent of the total for each type of service.

TYPE OF SERVICE	YES/NO?	ARE FEES CHARGED? (IF SO, HOW MUCH & HOW DETERMINED?)	APPROXIMATE PERCENT OF USE FOR EACH TYPE OF SERVICE
In-Library Ready Reference			
In-Library Extended Reference			
Phone Reference			
Reference by Mail			
Check-out of Materials			
Interlibrary Loan			
On-Line Computer Searching			
Document Delivery Service (other than Interlibrary Loan)			
Other Services (Specify)			

Total must be 100%.

4LF
3-2-82

Figure 1 (Cont'd.)

4. Do you promote your collections and services to off-campus, nonacademic users ? If so, how?

5. Do you have a "Friends of the Library" or similar organization? If so, are off-campus, nonacademic users included in it? What services are included in their dues?

Can these dues be used to supplement the regular library budget?

6. Try to give some indication of the amount of support (financial or otherwise) for services to off-campus, nonacademic users.

7. Briefly comment on other libraries and information services which you feel also serve some of the engineering information needs of your off-campus, nonacademic users. Do these include academic libraries, public libraries, state library, special libraries, information services (or brokers), or some combination of all?

Who is filling the majority of the engineering needs of these users?

Do you have any special advantages or disadvantages relative to these libraries in serving off-campus users who need engineering information (such as proximity, superior collections, etc.)?

THANK YOU VERY MUCH FOR YOUR HELP. PLEASE RETURN THE COMPLETED SURVEY FORM IN THE SELF-ADRESSED, STAMPED ENVELOPE PROVIDED.

HLF
3-2-82

Figure 1 (Concluded)

The enclosed survey is for librarians responsible for the engineering portion of a college or university library, whether engineering is handled through a separate library or as part of a more comprehensive unit. If you are not the right person to complete this form, please give it to the appropriate one.

This survey is intended to determine, at least in a preliminary fashion, the nature and degree of library support provided by academic libraries to meet the engineering information needs of industry (defined, in this case, as the somewhat broader category of off-campus, non-academic users). It is hoped that the results will be useful to academic libraries by indicating what their neighbors are doing with regard to this need, and suggesting ways the need might be addressed for their particular circumstances.

I will be presenting results of this survey at the 1986 Annual ASEE Conference in an Engineering Libraries Division session. It may be that you would prefer that your particular institution not be identified with your answers, at least for this presentation. In any case, I will present the results without referring to your particular library. You can always communicate with one another later; the completed surveys willl remain.

I realize that your time is valuable. All of us seem to be bombarded with survey questionnaires. In this instance I have tried to make the form as simple to complete as possible by allowing estimates and approximations in many places. Don't try to generate data for this or spend a lot of time looking for hard-to-locate information. I expect that the answers you provide may be based largely on what you and those around you "know" right now.

Finally, I realize I am overlapping a little with the survey by John Forys for the Standards Committee. I don't want to interfere with his survey in any way. Do not neglect his survey to do this one. However, I think you will agree that my survey is much narrower in focus and is also quite different in that it invites descriptive answers rather than "hard-to-determine" data or statistics.

PLEASE RETURN THE COMPLETED FORM NO LATER THAN MAY 1. THANK YOU.

Hugh Franklin
Engineering Librarian
Oregon State University

Figure 2
PERCENT OF SERVICE
BY CATEGORY OF USER

17

LIBRARY	Companies (Legal/Technical)	Consultants Entrepreneurs Inventors	Government Agencies (State/Federal)	Other
1	55	40	5 (5, 0)	0
2	-	-	-	-
3	-	-	-	-
4	75	25	0	0
5	90 (5, 85)	5	0	5
6	65 (5, 60)	30	5 (2.5, 2.5)	0
7	-	-	-	-
8	-	-	-	-
9	42 (2, 40)	2	55 (25, 30)	1
10	25	37.5	37.5 (37.5, 0)	0
11	72 (2, 70)	5	11 (6, 5)	12
12	69 (4, 65)	15	12 (4, 8)	4
13	80 (20, 60)	10	10 (10, 0)	0
14	-	-	-	-
15	10 (0, 10)	15	20 (10, 10)	55
16	60	15	20 (10, 10)	5
17	75	25	0	0
18	90 (1, 89)	8	2 (1, 1)	0
19	-	-	-	-
20	70	20	10 (0, 10)	0
21	50	30	15 (10, 5)	5
22	-	-	-	-
23	85 (5, 80)	10	5 (1, 4)	-
24	62 (2, 60)	27	11 (8, 3)	0
25	12	18	20 (10, 10)	50

Figure 3
AVERAGE PERCENT OF USE
BY CATEGORY OF USER

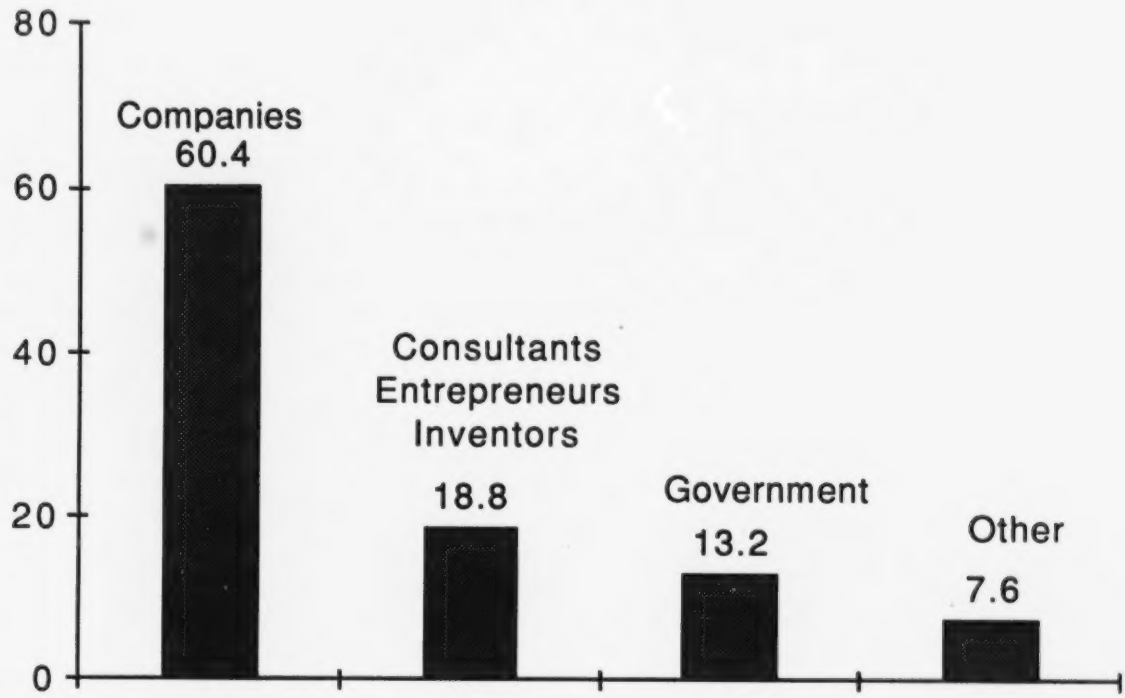


Figure 4
PERCENT OF USE
BY TYPE OF MATERIAL

LIBRARY	Standards	Product Information	Technical Reports	Books & Periodicals	Other
1	25	20	10	40	5 (theses)
2	10	0	45	45	0
3	70	10	0	20	0
4	10	15	15	60	0
5	2.63	0	2.63	94.74	0
6	15	15	10	50	10 (patents)
7	-	-	-	-	-
8	20	10	0	70	0
9	10	5	10	75	0
10	9.8	1.96	29.41	58.82	0
11	1	1	3	95	0
12	3	1	25	66	5 (student projects and videotapes)
13	0	0	0	100	0
14	60	5	5	30	0
15	15	10	10	65	0
16	10	5	10	75	0
17	10	10	5	75	0
18	1	1	3	95	0
19	10	10	20	60	0
20	15	10	30	45	0
21	15	5	5	50	25 (patents)
22	3	0	3	94	0
23	4	1	25	70	0
24	8	0	30	54	8 (patents)
25	5	5	10	80	0

Figure 5
AVERAGE PERCENT OF USE
BY TYPE OF MATERIAL

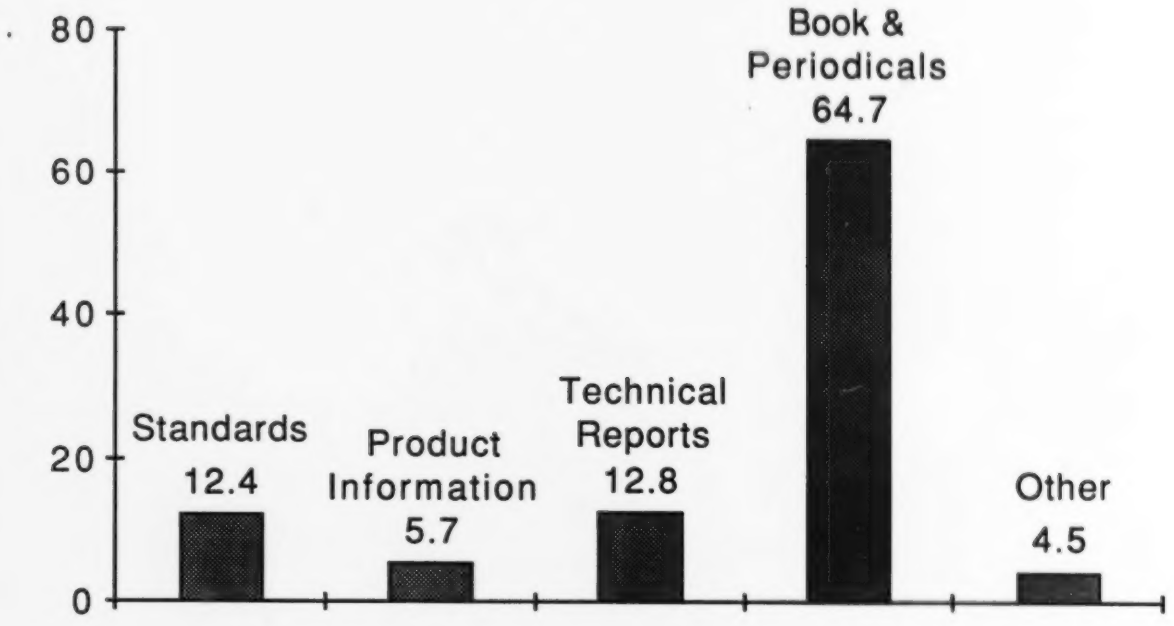


Figure 6
PERCENT OF SERVICE
BY TYPE

LIBRARY	Ready Reference	Extended Reference	Phone Reference	Mail Reference	Circulation	Interlibrary Loan	Online Database Searching	Document Delivery	Other
1	20	5	10	10	15	25	10	5	0
2	10	2	2	2	10	70	4	0	0
3	18	0	1	1	30	0	50	0	0
4	50	0	0	0	15	15	20	0	0
5	5	0	5	1	75	0	14	0	0
6	10	20	10	2.5	42.5	15	0	0	0
7	-	-	-	-	-	-	-	-	-
8	0	10	0	10	0	30	50	0	0
9	20	10	5	5	40	0	20	0	0
10	-	-	-	-	-	-	-	-	-
11	2	0	3	75	5	5	10	0	0
12	5	3	3	1	8	65	15	0	0
13	10	0	5	5	80	0	0	0	0
14	50	0	50	0	0	0	0	0	0
15	10	5	5	0	75	0	5	0	0
16	5	5	5	2	80	0	3	0	0
17	5	2.5	5	5	2.5	30	30	20	0
18	2	3	2	1	10	80	2	0	0
19	-	-	-	-	-	-	-	-	-
20	10	5	10	5	25	10	10	0	25 (photocopy)
21	-	-	-	-	-	-	-	-	-
22	2.22	2.22	5.56	0	2.22	0	82.22	5.56	0
23	43	2	40	0	10	0	5	0	0
24	10	15	5	0	20	30	5	15	0
25	8	0	7	5	30	40	10	0	0

Figure 7
AVERAGE PERCENT OF USE
BY TYPE

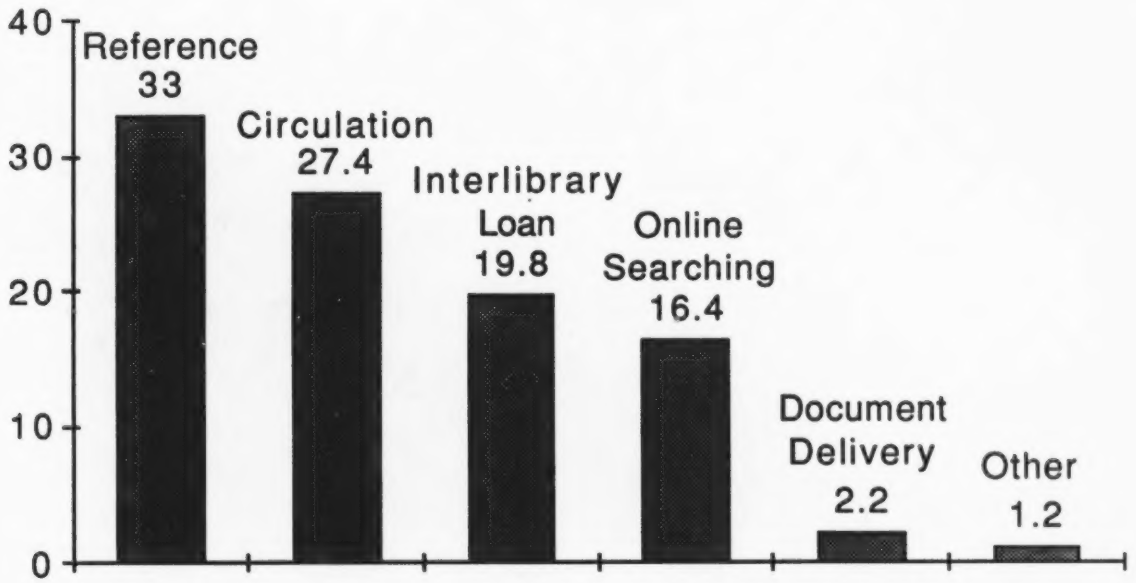
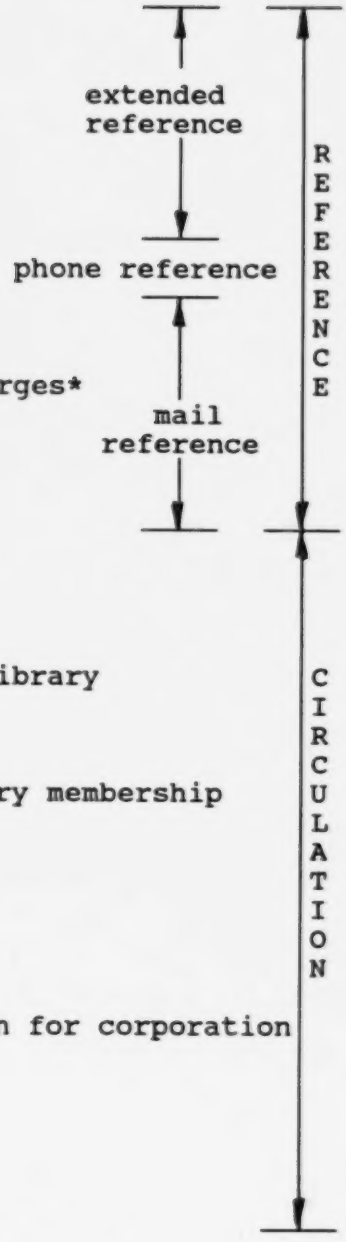


Figure 8
FEES FOR SERVICE ?

LIBRARY	Ready Reference	Extended Reference	Phone Reference	Mail Reference	Circulation
1	N	N	N	N	N
2	N	N	N	N	Y (10)
3	N	-	N	N	N
4	N	Y (1)	-	N	Y (11)
5	N	-	N	N	Y (12)
6	N	N	N	N	N
7	N	N	N	-	-
8	N	Y (2)	N	Y (6)	N
9	N	N	N	N	N
10	-	-	-	-	-
11	N	Y (3)	N	Y (7)	Y (13)
12	N	N	N	N	N
13	N	-	N	-	Y (14)
14	N	N	N	N	Y (15)
15	-	-	-	-	Y (16)
16	-	-	-	-	-
17	N	N	Y (5)	Y (8)	Y (17)
18	N	N	N	N	N
19	N	N	N	N	Y (18)
20	N	N	N	N	N
21	N	N	N	N	N
22	N	Y (4)	N	Y (9)	N
23	N	-	N	N	Y (19)
24	N	N	N	-	Y (20)
25	N	-	N	N	Y (21)

Figure 9
Specific Fees



(1) $20/hr.
(2) $25 plus costs
(3) $45/hr. (for research)*
(4) $30/hr.
(5) $45/hr. for > 15 minutes
(6) $25 plus costs
(7) $45/hr. (for research) plus delivery charges*
(8) $45/hr. for > 15 minutes
(9) $30/hr. if extensive
(10) $500/yr.
(11) $250/yr.
(12) $300/yr. or donation to Friends of the Library
(13) $12/item*
(14) varies according to Friends of the Library membership
(15) $250/yr.
(16) $15 (per year?)
(17) $40/yr.
(18) $20/yr. for individual; sizeable donation for corporation
(19) $50/yr.
(20) $30/yr.
(21) $15 (per year?)

* Prices per November, 1988